

How common is back pain?

Back pain in adolescents (and adults) is very common. The most common reason for back pain is muscle strain. This can be caused by a single movement, a repetitive movement in a sport and can be brought on and worsened by stress levels. Typically these types of pain or injury will resolve within a few weeks' time with adequate rest and progression with core strengthening.

When should I be worried?

Back pain in general is not dangerous, however there are a few symptoms associated with back pain that should be evaluated by a health care provider promptly. In a young, or school age child, back pain that lasts a few days should be checked out. Other red flags which should be evaluated quickly include:

- fever
- unexplained weight loss
- difficulty walking
- numbness or tingling of the legs or arms
- pain that shoots down legs
- sudden onset of urinary accidents
- pain that wakes a child in the night

What are the causes of back pain?

In the general population, there are several causes to back pain, below are two of the most common.

A specific motion such as lifting or bending can precipitate the pain. Over-activity, such as the first game in the season of softball or soccer is another common cause.

Musculoskeletal strain, from sports or activities, is most often the cause of back pain in children and adolescents. Teenagers tend to have more persistent pain than younger children. Back pain in this age group is frequently related to tight hamstrings and weak abdominal muscles.

Stress Fracture (Spondylolysis) may contribute to lower back pain. This may occur during repeating motion or arching of the spine, in soccer or gymnastics. A physical exam of the back will help make this diagnosis. If your provider is concerned for Spondylolysis they may order xrays.

In the first days of symptoms relative rest from activities, heating pads or patches and anti-inflammatory medicines (NSAIDs) like Tylenol and ibuprofen may be helpful.

Relative rest: your child may need to restrict activities including competitive sports for a few days for a few weeks. This does not mean your child is bed bound, but rather that they decrease their levels of activity. Heating pads/patches: there are several types of heating pads, electric, microwaveable and hot water. Be sure to protect the skin under heating pads, use a low setting with electric heating pads, unplug electric heating pads when done with use.

Heating patches are also available without a prescription at most pharmacies, most contain menthol or eucalyptus so be careful with skin allergies and check skin under heating patches frequently, and follow package instructions on application and removal.

Since the most common cause of back pain in children and adolescents is due to musculoskeletal strain, exercises that strengthen the muscles of the back and abdomen are utilized. Performing these exercises will help improve core muscle strength, posture, and body mechanics- all of this will improve back pain.

Treatment: Stretching and Strengthening

1. **Single Knee to Chest Stretch** - Lie on your back with one knee bent. Hold thigh behind knee and bring one knee up to chest. Hold 30 seconds. Relax. Repeat three times on each side.



2. **Hamstring Stretch** - Lie on your back and bring affected leg towards your chest. Grab the back of your thigh and try to extend your leg. Hold this position for 30 to 60 seconds, feeling a stretch in the back of your thigh. Repeat three times. You may also try this with a towel around your foot if it is more comfortable.



3. **Heel Raises** - While standing, on the floor or on a small step balance yourself on both feet and hold onto a wall for balance. Rise up on your toes, hold for five seconds, and then lower yourself back down. Repeat 10 times, and do 3 sets of 10. Once you are comfortable with this, try on one leg. 3 sets of 10.



Back Pain

Core Exercises

4. **Abdominal Contraction** - Lie on your back with knees bent and hands resting below ribs. Tighten abdominal muscles to squeeze ribs down toward back. Be sure not to hold breath. Hold 30 seconds. Relax. Repeat 3 times on each side.



5. **Pelvic Tilts** - Lie on your back with both knees bent and feet planted on the floor. Gently tuck your buttocks under and front of hips slightly up and think of pulling your belly button in towards your back as you do this. Hold for 10 seconds and repeat 10 times.



6. **Abdominal Crunch** - Lie on your back with both knees bent and feet planted on the floor. Tuck your buttocks under like in the pelvis tilt exercise. Gently place both hands behind your head for support and tuck your upper body in. **DO NOT PULL YOUR HEAD WITH YOUR HANDS.** The movement should come from squeezing your abdominal muscles.



7. **Cat Cow** - Start on your hands and knees. While breathing, slowly in round your back like a scared cat and hold for 1-2 seconds. While breathing out, arch your back to cow position. These should be slow gentle movements. Repeat this cycle 10 times.



Back Pain

8. **Forearm Plank** - Lie down facing the floor on your forearms. Raise yourself up until resting on your knees and elbows. Maintain your body straight from your head to your knees. Hold for five to ten seconds. If this is easy for you, lift your knees up off the floor. You may be able to work up to holding plank for 30 seconds to 1 minute, but only do this if you can keep your body straight like a board.



9. **Plank (Upper Pushup)** - Lie down facing the floor with your hands planted on either side next to your chest. Raise yourself up until resting on your knees and hands. Maintain your body straight from your head to your knees. Hold for five to ten seconds. If this is easy for you, lift your knees up off the floor and keep a straight line from head to toes. You may be able to work up to holding plank for 30 seconds to 1 minute, but only do this if you can keep your body straight like a board.



10. **Side Plank** - Start in hands and knees position and slowly lift one arm off the ground and roll slightly so all of your weight is on one arm the same knee and the side of the opposite foot. Keep your body in one straight line. If this is easy, you can straighten the lower leg out so weight is on your hand and feet only. Hold for five to ten seconds. You may be able to work up to holding plank for 30 seconds to 1 minute, but only do this if you can keep your body straight like a board.



11. **Opposite Arm and Leg** - Lie down facing the floor. You may use a rolled up towel under your forehead for comfort. Lift up the opposite arm and leg two inches above the floor. Hold this position for five to ten seconds. Repeat 10 times on each side. Do three sets.



Back Pain

12. **E-Y-I** - Lay on your stomach. Gently lift upper chest off the ground slightly. Start with arms in an “E” position then to “Y” and finally in an “I” position. Repeat 10 times. Do 3 sets.



13. **Dead Bugs** - Lie on your back and place both hands under your buttocks. Bring both legs up to point to the ceiling with knees slightly bent. Gently lower one leg towards the ground then slowly back up. Try to keep your lower back on the floor. Repeat with opposite leg. Complete 3 sets of 10.



14. **Hollow Hold** - Lie on your back and place both hands under your buttocks. Lift shoulders and feet up while keeping lower back on the floor or bed. Only complete this exercise if you can keep your low back on the ground. Hold for 10 seconds. Do three sets.

